

In the claims:

Please amend the claims as follows:

1. (Canceled)
2. (Original rewritten in independent form) A dryer for drying vegetable product comprising:
- a thermal collector constructed and arranged to convert solar energy to heat energy;
 - a heat transfer system;
 - a housing having a drying chamber;
 - wherein said heat transfer system is in thermal communication with both said thermal collector and said drying chamber such that heat is able to move from said thermal collector to said drying chamber; and
 - further comprising a photovoltaic module constructed and arranged to provide electrical power to said heat transfer system, said photovoltaic module being electrically connected to said heat transfer system.
3. (Original) The dryer of claim 2 wherein said photovoltaic module further comprises a battery constructed and arranged to store electrical energy.
4. (Original) The dryer of claim 3 wherein said photovoltaic module provides all of the electrical energy consumed by said dryer.
5. (Original rewritten in independent form) A dryer for drying vegetable product comprising:
- a thermal collector constructed and arranged to convert solar energy to heat energy;
 - a heat transfer system;
 - a housing having a drying chamber; and
 - wherein said heat transfer system is in thermal communication with both said thermal collector and said drying chamber such that heat is able to move from said thermal collector to said drying chamber;
 - wherein said heat transfer system further comprises:

a first heat transfer circuit including a first pump and a first heat transfer medium;

a second heat transfer circuit including a second pump and a second heat transfer medium;

a first heat exchanger; and

wherein said first heat exchanger is in thermal communication with said thermal collector via said first heat transfer circuit and said first heat exchanger is in thermal communication with said drying chamber via said second heat transfer circuit such that heat is able to move from said first heat transfer circuit to said second heat transfer circuit.

6. (Original) The dryer of claim 5 wherein said heat transfer system further comprises a second heat exchanger.

7. (Original) The dryer of claim 5 wherein said heat transfer system further comprises a heat storage medium, said heat storage medium being in thermal communication with said drying chamber such that heat is able to move from said heat storage medium to said second heat transfer circuit.

8. (Original) The dryer of claim 5 wherein said heat transfer system further comprises an auxiliary heat source, said auxiliary heat source being in thermal communication with said drying chamber such that heat is able to move from said auxiliary heat source to said second heat transfer circuit.

9. (Original) The dryer of claim 8 wherein the auxiliary heat source is a furnace constructed and arranged to burn biomass.

10. (Original) The dryer of claim 9 wherein said biomass is coffee parchment.

11. (Original) The dryer of claim 5 wherein said first heat transfer medium is water.

12. (Original) The dryer of claim 5 wherein said second heat transfer medium is air.

13. (Original) The dryer of claim 5 further comprising a heat storage medium in thermal communication with an auxiliary heat source, said thermal collector, and said drying chamber, wherein heat is able to move from said auxiliary heat source to said heat storage medium, from said thermal collector to said heat storage medium, and from said heat storage medium to said drying chamber.

14.-16. (Canceled)

17. (Original rewritten in independent form) A dryer for drying vegetable product comprising:

a thermal collector constructed and arranged to convert solar energy to heat energy;

a heat transfer system;

a housing having a drying chamber; and

wherein said heat transfer system is in thermal communication with both said thermal collector and said drying chamber such that heat is able to move from said thermal collector to said drying chamber;

wherein said heat transfer system also comprises:

an auxiliary generator in electrical communication with an electrical system of the dryer, the generator capable of providing all electrical energy required to operate the dryer.

18. (Original) The dryer of claim 17 wherein the generator is capable of providing all electrical energy required to operate all other coffee processing devices such that the dryer is a component of an off-grid coffee processing system.

19. (Original) The dryer of claim 17 wherein the generator is an external combustion engine.

20. (Original) The dryer of claim 17 wherein the generator operates according to the Stirling thermal cycle.

21. (Original) The dryer of claim 17 further comprising a heat exchanger in thermal communication with an exhaust of the generator and with the heat transfer system, the heat exchanger constructed and arranged to transfer heat exhausted from the generator to the heat transfer system.

22. (Original) A method for drying vegetable product in a dryer comprising:

placing said vegetable product in a drying chamber;

collecting solar energy;

transforming said solar energy into heat energy;

transferring said heat energy into said drying chamber; and

exhausting moisture from said drying chamber.

23. (Original) The method of claim 22 further comprising heating said drying chamber to a temperature sufficiently high to accelerate evaporation of moisture from said vegetable product and sufficiently low to avoid adversely affecting said vegetable product.

24. (Original) The method of claim 22 wherein said vegetable product is coffee beans.

25. (Original) The method of claim 22 further comprising:
burning biomass within a furnace to produce additional heat energy; and
transferring said additional heat energy from said furnace to said drying chamber.

26. (Original) The method of claim 25 wherein said biomass is coffee parchment.

27. (Original) The method of claim 22 further comprising:
storing a portion of said heat energy; and
transferring said portion to said drying chamber.

28. (Canceled)

29. (Original) The method of claim 22 wherein all electrical energy and all said heat energy consumed by said dryer are produced by collecting light from the sun and burning coffee parchment.

30. (Original) The method of claim 22 further comprising:
removing dry vegetable product;
drying wet vegetable product while said dry vegetable product is removed; and
adding additional wet vegetable product to replace said dry vegetable product.

31. (Original) The method of claim 30 further comprising:
rotating said wet vegetable product into a first space vacated by said dry vegetable product; and
rotating said additional wet vegetable product into a second space vacated by said wet vegetable product.

32. (Previously amended) A dryer for drying vegetable product comprising:
a housing defining a cylindrical drying chamber, the housing having an outer wall extending around the drying chamber, the outer wall defining a plurality of perforations for intaking and exhausting fluid;

an infuser adjacent to the perforations for infusing fluid through the perforations;
and

wherein the housing is constructed and arranged to rotate relative to the infuser.

33. (Original) The dryer of claim 32 wherein the infuser is periodically adjacent to first and second relative sides of the outer wall, the first and second sides capable of changing position as the housing rotates relative to the infuser, the first relative side being in a position for intaking fluid into the drying chamber when the second relative side is in a position for exhausting fluid from the drying chamber.

34. (Original) The dryer of claim 32 wherein the infuser is in thermal communication with a heat source for heating fluid to be infused into the drying chamber.

35. (Canceled)

36. (Previously amended) A housing defining a drying chamber for drying vegetable product, the housing comprising:

a cylindrical wall extending around the drying chamber, opposing end walls at either end of the drying chamber, a plurality of perforations located for intaking and exhausting fluid, wherein the housing is constructed and arranged to rotate about an axis.

37. (Previously amended) The housing of claim 36 further comprising a set of doors in the cylindrical wall to load and unload vegetable product.

38. (Original) The housing of claim 36 further comprising a set of baffles for mixing produce within the drying chamber, the baffles extending from the inner surface of the cylindrical wall.

39. (Previously amended) A dryer for drying vegetable product, comprising:
a housing having a drying chamber, the housing having a fluid intake port and a fluid exhaust port located along a fluid flow path of the drying chamber, the intake and exhaust ports oriented such that the fluid flow path includes a substantial component in the vertical direction; and

a set of support members providing channels substantially oriented in the direction of the fluid flow path.

40. (Original) The dryer of claim 39 wherein the channels are adjustable relative to the vertical direction.

41. (Original) The dryer of claim 39 wherein the housing further comprises an entry port and an exit port, the entry port located vertically upward relative to the exit port.

42. (Previously amended) The dryer of claim 39 wherein the channels are constructed and arranged to conduct product from a higher level relative to a ground level to a lower level relative to the ground level.

